

What Is Claimed Is:

1. A method of fabricating a liquid crystal display device, comprising:

forming a thin film transistor in a pixel region and a pad on an edge region of a first substrate;

depositing an organic passivation layer over the first substrate; and

removing the organic passivation layer in the edge region using a diffraction mask to expose a portion of the pad, wherein the diffraction mask has a slit portion including a plurality of slits having different widths.

2. The method of claim 1, wherein the organic passivation layer is formed of one of benzo cyclo butene (BCB) and photo-acryl.

3. The method of claim 1, wherein the removing the organic passivation comprises,

depositing a photoresist layer on the organic passivation layer in the edge region;

placing the diffraction mask having first and second light transmission regions over the photoresist layer for a light exposure, so that the first light transmission region transmits an amount of light greater than the second light transmission region;

developing the photoresist layer to completely remove the photoresist layer of the second light transmission region and to remain the photoresist layer of the first light transmission region;

etching the organic passivation layer to remove a part of the organic passivation layer of the second light transmission region;

removing the photoresist layer; and

etching the organic passivation layer to remove a remaining organic passivation layer.

4. The method of claim 3, wherein the diffraction mask of the second transmission region has a slit width greater than that of the first transmission region.

5. The method of claim 3, wherein the diffraction mask of the second light transmission region has a plurality of slits.

6. The method of claim 1, wherein the forming a thin film transistor comprises,

forming a gate electrode on the first substrate;

depositing a gate insulating layer over the first substrate;

forming a semiconductor layer on the gate insulating layer;

and

forming a source electrode and a drain electrode on the semiconductor layer.

7. The method of claim 1, further comprising forming a metal layer on the exposed portion of the pad.

8. The method of claim 7, wherein the metal layer is formed of one of indium tin oxide (ITO) and indium zinc oxide (IZO).

9. The method of claim 1, further comprising:
forming a black matrix and a color filter layer on a second substrate;
forming a sealant on the edge region of the first substrate and attaching the first and second substrates to each other; and
forming a liquid crystal layer between the first and second substrates.

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10. A method of fabricating a liquid crystal display device, comprising:

forming a thin film transistor in a pixel region and a pad on an edge region of a first substrate;

depositing an organic passivation layer over the first substrate;

depositing a photoresist layer on the organic passivation layer in the edge region;

placing the diffraction mask having first and second light transmission regions over the photoresist layer for a light exposure, so that the first light transmission region transmits an amount of light greater than the second light transmission region;

developing the photoresist layer to completely remove the photoresist layer of the second light transmission region and to remain the photoresist layer of the first light transmission region;

etching the organic passivation layer to remove a part of the organic passivation layer of the second light transmission region;

removing the photoresist layer; and

etching the organic passivation layer to remove a remaining organic passivation layer.

11. The method of claim 10, wherein the organic passivation layer is formed of one of benzo cyclo butene (BCB) and photo-acryl.

12. The method of claim 10, wherein the diffraction mask of the second transmission region has a slit width greater than that of the first transmission region.

13. The method of claim 10, wherein the diffraction mask of the second light transmission region has a plurality of slits.

14. The method of claim 10, wherein the forming a thin film transistor comprises,

forming a gate electrode on the first substrate;

depositing a gate insulating layer over the first substrate;

forming a semiconductor layer on the gate insulating layer;

and

forming a source electrode and a drain electrode on the semiconductor layer.

15. The method of claim 10, further comprising forming a metal layer on the exposed portion of the pad.

16. The method of claim 15, wherein the metal layer is formed of one of indium tin oxide (ITO) and indium zinc oxide (IZO).

17. The method of claim 10, further comprising:

forming a black matrix and a color filter layer on a second substrate;

forming a sealant on the edge region of the first substrate and attaching the first and second substrates to each other; and

forming a liquid crystal layer between the first and second substrates.